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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,500	07/17/2006	Maxime Makarov	56136/DBP/N75	2253

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EXAMINER	
STAFFORD, PATRICK	

ART UNIT	PAPER NUMBER
2828	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/552,500	MAKAROV ET AL.	
	Examiner	Art Unit	
	Patrick Stafford	2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/7/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4-5 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Noda et al (U.S. Patent 5,048,045, hereafter '045).

Claim 1: '045 teaches a method for controlling the spatio-temporal uniformity of a pulsed gas laser beam, in which a pulsed electric discharge is brought about in a gas (col. 4, lines 39-45) between two electrodes (col. 3, lines 38-40 and Fig. 3, parts 12 and 13) and an X-ray preionisation beam is applied to this gas whose axis is substantially in alignment with that of the discharge (col. 3, lines 45-46 and Fig. 3, part 9), characterized in that a lateral intensification of the electric field is produced in the space between the electrodes in order to stabilize the discharge in time and space (col. 5, lines 27-31), and in that an axial intensification of the X-ray beam is produced in order to compensate for the modifications of the uniformity of the discharge resulting from this lateral intensification of the electric field (col. 5, lines 59-67).

Claim 2: '045 teaches the laser for carrying out the method according to claim 1, characterized in that it comprises at least one electrode which is profiled in order to comprise two raised lateral portions which allow the lateral intensification of the electric field to be obtained in this region (col. 3, lines 47-53 and Fig. 3, parts 7 and 8).

Claim 4: '045 teaches the laser according to claim 2, characterized in that the two electrodes (101, 102) are profiled in order to obtain the lateral intensification of the electric field (col. 4, lines 31-34 and Fig. 3, part 4, curved profile).

Claim 5: '045 teaches the laser according to claim 2, characterized in that it comprises a progressive mask relative to the X-rays in order to progressively attenuate, from the centre of the discharge to the edges thereof, the X-ray preionisation beam applied along an axis which is substantially in alignment with that of the discharge in order to compensate for the lack of uniformity of the discharge resulting from the intensification of the electric field at the edges thereof (col. 3, lines 54-62 and Fig. 4, part 10).

Claim 9: '045 teaches the laser according to claim 2, characterized in that it is of the excimer type (col. 1, lines 6-7).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noda et al (U.S. Patent 5,048,045, hereafter '045).

Claim 3: '045 teaches the laser according to claim 2. It teaches the height of the raised lateral portions is substantially less than the distance between the two electrodes (Fig. 3, parts 7 and 8 and the distance between parts 12 and 13). It does not explicitly teach the height of the raised

lateral portions is substantially in the order of one hundredth of the distance between the two electrodes. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the height of the raised lateral portions be substantially in the order of one hundredth of the distance between the two electrodes, since it has been found that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noda et al (U.S. Patent 5,048,045, hereafter '045) in view of Noda et al (U.S. Patent 5,077,749, hereafter '749). Claim 6: '045 teaches the laser according to claim 5, characterized in that the progressive mask is formed by a plate which absorbs the X-rays (col. 3, lines 54-59 and Fig. 4, part 6). It does not explicitly teach the thickness is reduced progressively from the locations opposite the two raised lateral portions where the absorption of the X-rays is at a maximum as far as a central portion where the absorption is substantially zero. However, '749 teaches a plate which absorbs the X-rays wherein the thickness is reduced progressively from the locations opposite the two raised lateral portions where the absorption of the X-rays is at a maximum as far as a central portion where the absorption is substantially zero (col. 7, lines 25-31 and Fig. 2, part 1) in order to equalize the X-ray. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have a plate which absorbs the X-rays wherein the thickness is reduced progressively from the locations opposite the two raised lateral portions where the absorption of the X-rays is at a maximum as far as a central portion where the absorption is substantially zero in order to equalize the X-ray.

Claim 7: '045 and '749 teach the laser according to claim 6. '749 teaches the progressive nature of the reduction in thickness of the plate which absorbs the X-rays allows the profile of the absorption curve of the X-rays to be adapted to the profile of the variation of the electric field between these two lateral intensifications (col. 9, lines 40-47).

Claim 8: '045 and '749 teach the laser according to claim 6. '045 teaches the plate which absorbs the X-rays is reduced in thickness in accordance with two substantially linear ramps which extend from one of the surfaces thereof in the region of the edges of the discharge in order to open at the other surface, with a central hole being defined which corresponds to the maximum transmission (col. 3, lines 45-46 and Fig. 3, part 9).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Stafford whose telephone number is (571) 270-1275. The examiner can normally be reached on M-Th 7:30-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MinSun Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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